Docket No. 163-689

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT OPERATION

In re application of:

Giovanni Meazza\

Serial No.: 10/573,052 Group Art Unit: 1626

Filing Date: March 22, 2006 Examiner: HAVLIN, ROBERT H

TITLE: DERIVATIVES OF 1,3 DIONES HAVING A HERBICIDAL ACTIVITY

New York, NY 10020
November 30, 2010

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

Sir:

This Amendment is being filed in response to the Office Action that was mailed July 14, 2010. Kindly amend the above identified application as follows:

IN THE CLAIMS

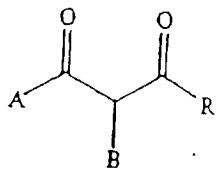
Please amend the claims of the p resent application under the provisions of 37 C.F.R. §1.121(c), as indicated below:

1. (Cancelled):

2. (Currently amended): The derivatives according to claims 17 and 19, characterized in that the compounds having formula (I) are present as tautomeric forms, pure or as blends of tautomeric forms, in any proportion whatsoever.

3-12 (Canceled)

13. (Currently amended): Herbicidal compositions containing, one or more compounds having general formula (I):

(I) 


wherein A, B and R have the meanings according to claims 17 and 19, possibly also as a blend of tautomers .

14. (Previously presented): The herbicidal compositions according to claim 13, including other herbicides, fungicides, insecticides, acaricides, fertilizers, compatible with the compounds having general formula (I).

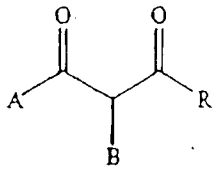
15. (Original): The herbicidal compositions according to claim 14, characterized in that the additional herbicides are selected from: acetochlor, acifluorfen, aclonifen, AKH-7088, alachlor, alloxydim, ametryn, amicarbazone, amidosulfuron, amitrole, anilofos, asulam, atrazine, azafenidin, azimsulfuron, aziprotryne, BAS 670 H, BAY MKH 6561, beflubutamid, benazolin, benfluralin, benfuresate, bensulfuron, bensulide, bentazone, benzfendizone, benzobicyclon, benzofenap, benzthiazuron, bifenox, bilanafos, bispyribac-sodium, bromacil, bromobutide, bromofenoxim, bromoxynil, butachlor, butafenacil, butamifos, butenachlor, butralin, butroxydim, butylate, cafenstrole, carbetamide, carfentrazone-ethyl, chlomethoxyfen, chloramben, chlorbromuron, chlorbufam, chlorflurenol, chloridazon, chlorimuron, chlornitrofen, chlorotoluron, chloroxuron, chlorpropham, chlorsulfuron, chlorthal, chlorthiamid, cinidon ethyl, cinmethylin, cinosulfuron, clethodim, clodinafop, clomazone, clomeprop, clopyralid, cloransulam-methyl, cumyluron (JC-940), cyanazine, cycloate, cyclosulfamuron, cycloxydim, cyhalofop-butyl, 2,4-D, 2,4-DB, daimuron, dalapon, desmedipham, desmetryn, dicamba, dichlobenil, dichlorprop, dichlorprop-P, diclofop, diclosulam, diethatyl, difenoxuron, difenzoquat, diflufenican, diflufenzopyr, dimefuron, dimepiperate, dimethachlor, dimethametryn, dimethenamid, dinitramine, dinosseb, dinoseb acetate, dinoterb, diphenamid, dipropetryn, diquat, dithiopyr, 1-diuron, eglinazine, endothal, EPTC, espropcarb, ethalfluralin, ethametsulfuron-methyl, ethidimuron, ethiozin (SMY 1500), ethofumesate, ethoxyfen-ethyl (HC-252), ethoxysulfuron, etobenzanid (HW 52), fenoxaprop, fenoxaprop-P,

fentrazamide, fenuron, flamprop, flamprop-M, flazasulfuron, florasulam, fluazifop, fluazifop-P, fluazolate (JV 485), flucarbazone-sodium, fluchloralin, flufenacet, flufenpyr ethyl, flumetsulam, flumiclorac-pentyl, flumioxazin, flumipropin, fluometuron, fluoroglycofen, fluoronitrofen, flupoxam, fluproanate, flupyrsulfuron, flurenol, fluridone, flurochloridone, fluroxypyr, flurtamone, fluthiacet-methyl, fomesafen, foramsulfuron, fosamine, furyloxyfen, glufosinate, glyphosate, halosulfuron-methyl, haloxyfop, haloxyfop-P-methyl, hexazinone, imazamethabenz, imazamox, imazapic, imazapyr, imazaquin, imazethapyr, imazosulfuron, indanofan, iodosulfuron, ioxynil, isopropalin, isoproturon, isouron, isoxaben, isoxachlortole, isoxaflutole, isoxapyrifop, KPP-421, lactofen, lenacil, linuron, LS830556, MCPA, MCPA-thioethyl, MCPB, mecoprop, mecoprop-P, mefenacet, mesosulfuron, mesotrione, metamitron, metazachlor, methabenzthiazuron, methazole, methoprotryne, methyldymron, metobenzuron, metobromuron, metolachlor, S-metolachlor, metosulam, metoxuron, metribuzin, metsulfuron, molinate, monalide, monolinuron, naproanilide, napropamide, naptalam, NC-330, neburon, nicosulfuron, nipyraclofen, norflurazon, orbencarb, oryzalin, oxadiargyl, oxadiazon, oxasulfuron, oxaziclomefone, oxyfluorfen, paraquat, pebulate, pendimethalin, penoxsulam, pentanochlor, pentoxazone, pethoxamid, phenmedipham, picloram, picolinafen, piperophos, pretilachlor, primisulfuron, prodiamine, profluazol, proglinazine, prometon, prometryne, propachlor, propanil, propaquizafop, propazine, propham, propisochlor, propyzamide, prosulfocarb, prosulfuron, pyraclonil, pyraflufen-ethyl, pyrazogyl (HAS-961),

pyrazolynate, pyrazosulfuron, pyrazoxyfen, pyribenzoxim, pyributicarb, pyridafol, pyridate, pyriftalid, pyriminobac-methyl, pyrithiobac-sodium, quinclorac, quinmerac, quizalofop, quizalofop-P, rimsulfuron, sethoxydim, siduron, simazine, simetryn, sulcotrione, sulfentrazone, sulfometuron-methyl, sulfosulfuron, 2,3,6-TBA, TCA-sodium, tebutam, tebuthiuron, tepraloxydim, terbacil, terbumeton, terbuthyl-azine, terbutryn, thenylchlor, thiazafluron, thiazopyr, thidiazimin, thifensulfuron-methyl, thiobencarb, tiocarbazil, tioclorim, tralkoxydim, tri-allate, triasulfuron, triaziflam, tribenuron, triclopyr, trietazine, trifloxysulfuron, trifluralin, triflusulfuron-methyl, tritosulfuron, UBI-C4874, vernolate.

16. (Original): The compositions according to any of the claims 13-15, characterized in that the concentration of active substance ranges from 1 to 90%.

17. (Currently amended): Derivatives of 1,3-diones having general formula (I):

(I) 


wherein:

-A represents:

an aryl group optionally substituted by one or more substituents selected from halogen, [[;]] $NO_2$ ,[[;]] CN, [[;]] CHO, [[;]] OH, [[;]] linear or branched C1-$C_6$ alkyl,[[;]] linear or branched $C_1$-$C_6$ haloalkyl, [[;]] linear or branched $C_1$-$C_6$ alkoxy[[l]], [[;]] linear or branched $C_1$-$C_6$ haloalkoxy[[l]], [[;]] $C_1$-$C_6$ cyanoalkyl,[[;]] $C_2$-$C_6$ alkoxyalkyl, [[;]] $C_2$-$C_6$ alkylthioalkyl, [[;]] $C_2$-$C_6$ alkylsulfinylalkyl, [[;]] $C_2$-$C_6$ alkylsulfonylalkyl, [[;]] $C_2$-$C_6$ haloalkoxyalkyl[[n]],[[;]] $C_2$-$C_6$ haloalkylthioalkyl, [[;]] $C_2$-$C_6$ haloalkylsulfinylalkyl [[;]], $C_2$-$C_6$ haloalkylsulfonylalkyl, [[;]] $C_2$-$C_6$ alkoxyalkoxy[[l]], [[or]] $C_2$-$C_6$ haloalkoxyalkoxy[[l]], ~~optionally substituted with a group selected from $C_1$-$C_4$ alkoxyl or $C_1$-$C_4$ haloalkoxyl;~~ $C_2$-$C_6$ alkylthioalkoxy[[l]],[[;]] $C_2$-$C_6$ haloalkylthioalkoxy[[l]], [[;]] $C_3$-$C_{12}$ dialkoxyalkyl,[[;]] $C_3$-$C_{12}$ dialkylthioalkyl,[[;]] $C_3$-$C_{12}$ dialkylthioalkoxy[[l]], [[;]] $C_3$-$C_{12}$ dialkoxyalkoxy[[l]], [[;]] $C_2$-$C_6$ haloalkoxyhaloalkoxy[[l]], [[;]] $C_3$-$C_{10}$ alkoxyalkoxyalkyl, [[;]] ~~$C_2$-$C_6$ alkenyl; $C_2$-$C_6$ haloalkenyl; $C_2$-$C_6$ alkenyloxy; $C_2$-$C_6$ haloalkenyloxy; $C_3$-$C_8$ alkenyloxyalkoxyl; $C_3$-$C_8$ haloalkenyloxyalkoxyl; $C_2$-$C_6$ alkynyl; $C_2$-$C_6$ haloalkynyl; $C_2$-$C_6$ alkynyloxy; $C_2$-$C_6$ haloalkynyloxy; $C_3$-$C_8$ alkynyloxyalkoxyl; $C_3$-$C_8$ haloalkynyloxyalkoxyl; $C_3$-$C_{12}$ acylaminoalkoxy; $C_2$-$C_8$ alkoxyiminoalkyl; $C_2$-$C_8$ haloalkoxyiminoalkyl; $C_3$-$C_8$ alkenyloxyiminoalkyl; $C_3$-$C_8$ haloalkenyloxyiminoalkyl; $C_3$-$C_8$ alkynyloxyiminoalkyl; $C_3$-$C_8$ haloalkynyloxyiminoalkyl; $C_5$-$C_{10}$ alkoxyalkynyloxyl; $C_6$-$C_{12}$ cycloalkylideneiminooxyalkyl; $C_6$-$C_{12}$ dialkylideneiminooxyalkyl;~~ —$S(O)_mR_1$, [[;]] —$OS(O)_tR_1$, [[;]] —$SO_2NR_2R_3$, [[;]] ~~—$CO_2R_4$; —$COR_5$; —$CONR_6R_7$; —$CSNR_8R_9$; —$NR_{10}R_{11}$; —$NR_{12}COR_{13}$; —$NR_{14}CO_2R_{15}$; —~~

~~$NR_{16}CONR_{17}R_{18}$; $PO(R_{19})_2$;~~ [[-]]$-Q_1$ [[;]] [[-]]$-ZQ_1$; ~~$(CR_{20}R_{21})pQ_2$; $Z(CR_{22}R_{23})pQ_3$; $(CR_{24}R_{25})pZQ_4$; $(CR_{26}R_{27})pZ(CR_{28}R_{29})qQ5$; $(CR_{30}R_{31})pZ(CR_{32}R_{33})qZ_1Q_6$; $Z_2(CR_{34}R_{35})p(C=Y)T$; $Z_3(CR_{36}R_{37})v(CR_{38}R_{39}=CR_{40}R_{41})(C=Y)T$;~~

or it represents a heterocyclic group selected from pyridyl, [[;]] pyrimidyl, [[;]] quinolinyl, [[;]] pyrazolyl, [[;]] thiazolyl, [[;]] oxazolyl, [[;]] thienyl, [[;]] furyl, ~~; benzothienyl; dihydrobenzothienyl; benzofuranyl; dihydrobenzofuranyl; benzoxazolyl; benzoxazolonyl; benzothiazolyl; benzothiazolonyl; benzoimidazolyl; benzoimidazolonyl; benzotriazolyl; chromanonyl; chromanyl; thiochromanonyl; thiochromanyl; 3a,4-dihydro-3H-indeno[1,2-c]isoxazolyl, 3a,4-dihydro-3H-chromeno[4,3-c]isoxazolyl, 5,5-dioxide 3a,4-dihydro-3H-thiochromeno[4,3-c]isoxazolyl, 2,3,3a,4-tetrahydrochromeno[4,3-c]pyrazolyl, 6,6-dioxide-2,3-dihydro-5H-[1,4]dithiino[2,3-c]thiochromenyl, 5,5-dioxide-2,3,3a,4-tetrahydrothiochromeno[4,3-c]pyrazolyl, 1′,1′-dioxide-2′,3′-dihydrospiro[1,3-dioxolano-2,4′-thiochromen]-yl, 1,1,4,4-tetraoxide-2,3-dihydro-1,4-benzodithiin-6-yl,~~ 4,4-dioxide-2,3-dihydro-1,4-benzoxathiin-7-yl, ~~1,1-dioxide-3-oxo-2,3-dihydro-1,2-benzoisothiazol-5-yl, 4-(alkoxyimino)-1,1-dioxide-3,4-dihydro-2H-thiochromen-6-yl, 1,1-dioxide-4-oxo-3,4-dihydro-2H-thiochromen-6-yl, 2,3-dihydro-1,4-benzoxathiin-7-yl,~~with said heterocyclic groups optionally substituted by one or more substituents selected from halogen, [[;]] $NO_2$, [[;]] CN, [[;]] CHO,[[;]] OH, [[;]] linear or branched $C_1$-$C_6$ alkyl,[[;]] linear or branched $C_1$-$C_6$ haloalkyl, [[;]] linear or branched $C_1$-$C_6$ alkoxy[[l]], [[;]] linear or

branched $C_1$-$C_6$ haloalkoxy[[l]], [[;]] $C_1$-$C_6$ cyanoalkyl, [[;]] $C_2$-$C_6$ alkoxyalky[[l]],[[;]] $C_2$-$C_6$ alkylthioalkyl, [[;]] $C_2$-$C_6$ alkylsulfinylalkyl, [[;]] $C_2$-$C_6$ alkylsulfonylalkyl, [[;]] $C_2$-$C_6$ haloalkoxyalkyl, [[;]] $C_2$-$C_6$ haloalkylthioalkyl, [[;]] $C_2$-$C_6$ haloalkylsulfinylalkyl, [[;]] $C_2$-$C_6$ haloalkylsulfonylalkyl, [[;]] $C_2$-$C_6$ alkoxyalkoxy[[l]], [[or]] $C_2$-$C_6$ haloalkoxyalkoxy[[l]], ~~optionally substituted with a group selected from $C_1$-$C_4$ alkoxyl or $C_1$-$C_4$ haloalkoxyl;~~ $C_2$-$C_6$ alkylthioalkoxy[[l]], [[;]] $C_2$-$C_6$ haloalkylthioalkoxy[[l]], [[;]] $C_3$-$C_{12}$ dialkoxyalkyl,[[;]] $C_3$-$C_{12}$ dialkylthioalkyl, [[;]] $C_3$-$C_{12}$ dialkylthioalkoxy[[l]], [[;]] $C_3$-$C_{12}$ dialkoxyalkoxy[[l]], [[;]] $C_2$-$C_6$ haloalkoxyhaloalkoxy[[l]], [[;]] $C_3$-$C_{10}$ alkoxyalkoxyalkyl, [[;]] ~~$C_2$-$C_6$ alkenyl; $C_2$-$C_6$ haloalkenyl; $C_2$-$C_6$ alkenyloxy; $C_2$-$C_6$ haloalkenyloxy; $C_3$-$C_8$ alkenyloxyalkoxyl; $C_3$-$C_8$ haloalkenyloxyalkoxyl; $C_2$-$C_6$ alkynyl; $C_2$-$C_6$ haloalkynyl; $C_2$-$C_6$ alkynyloxy; $C_2$-$C_6$ haloalkynyloxy; $C_3$-$C_8$ alkynyloxyalkoxyl; $C_3$-$C_8$ haloalkynyloxyalkoxyl; $C_3$-$C_{12}$ acylaminoalkoxy; $C_2$-$C_8$ alkoxyiminoalkyl; $C_2$-$C_8$ haloalkoxyiminoalkyl; $C_3$-$C_8$ alkenyloxyiminoalkyl; $C_3$-$C_8$ haloalkenyloxyiminoalkyl; $C_3$-$C_8$ alkynyloxyiminoalkyl; $C_3$-$C_8$ haloalkynyloxyiminoalkyl; $C_5$-$C_{30}$ alkoxyalkynyloxyl; $C_6$-$C_{12}$ cycloalkylideneiminooxyalkyl; $C_6$-$C_{12}$ dialkylideneiminooxyalkyl;~~ ~~—~~$S(O)_mR_1$, [[;]] ~~—~~$OS(O)_tR_1$, [[;]] ~~—~~$SO_2NR_2R_3$, [[;]] ~~—$CO_2R_4$; —$COR_5$; —$CONR_6R_7$; —$CSNR_8R_9$; —$NR_{10}R_{11}$; —$NR_{12}COR_{13}$; —$NR_{14}CO_2R_{15}$; —$NR_{16}CONR_{17}R_{18}$; —$PO(R_{19})_2$;~~ [[-]]=Q, [[;]] [[-]]=$ZQ_1$[[1]];~~—~~ ~~$(CR_{20}R_{21})_pQ_2$; —$Z(CR_{22}R_{23})_pQ_3$; —$(CR_{24}R_{25})_pZQ_4$; —$(CR_{26}R_{27})_pZ(CR_{29}R_{29})_qQ_5$; —$(CR_{30}R_{31})_pZ(CR_{32}R_{33})_qZ_1Q_6$; —$Z_2(CR_{34}R_{35})_p(C=Y)T$; —$Z_3(CR_{36}R_{37})$; $(CR_{38}R_{39}=CR_{40}R_{41})(C=Y)T$;~~

-B represents a D-$(R_x)_n$ group;

-R represents a linear or branched $C_1$-$C_6$ haloalkyl group, [[;]] or a $C_3$-$C_6$ cycloalkyl ~~or $C_4$-$C_{12}$ cyclo-alkylalkyl~~ group; ~~optionally substituted with halogen atoms or $C_1$-$C_6$ alkyl or $C_1$-$C_6$ thioalkyl or $C_1$-$C_6$ alkoxyl or $C_2$-$C_6$ alkoxycarbonyl groups; $C_2$-$C_6$ alkenyl groups; $C_2$-$C_6$ alkynyl groups; the latter two groups; in turn; optionally substituted with halogen atoms; a $C_5$-$C_6$ cycloalkenyl group optionally substituted with halogen atoms or $C_1$-$C_6$ alkyl groups;~~

-$R_1$ ~~and $R_{19}$~~ represents a $C_1$-$C_6$ alkyl group or a $C_1$-$C_6$ haloalkyl group; ~~a $C_3$-$C_6$ cycloalkyl group; an aryl group optionally substituted by one or more substituents selected from halogen, $NO_2$, CN, CHO, linear or branched $C_1$-$C_6$ alkyl, linear or branched $C_1$-$C_6$ haloalkyl, linear or branched $C_1$-$C_6$ alkoxyl, linear or branched $C_3$-$C_6$ haloalkoxyl, $C_1$-$C_6$ alkylsulfonyl, $C_2$-$C_6$ alkoxycarbonyl;~~

-m is equal to 0, 1 or 2;

-t is equal to 1 or 2;

-$R_2$, $R_3$, ~~$R_6$, $R_7$, $R_8$, $R_9$, $R_{10}$, $R_{11}$, $R_{17}$ and $R_{18}$,~~ the same or different, represent a hydrogen atom, [[;]] a linear or branched $C_1$-$C_6$ alkyl group in turn optionally substituted with halogen atoms; ~~a $C_1$-$C_6$ alkoxyl group; a~~

~~$C_3$-$C_6$ cycloalkyl group; an arylalkyl group or an aryl group; said arylalkyl and aryl groups also optionally substituted by one or more substituents selected from halogen, $NO_2$, CN, CHO, linear or branched $C_1$-$C_6$ alkyl, linear or branched $C_1$-$C_6$ haloalkyl, linear or branched $C_1$-$C_6$ alkoxyl, linear or branched $C_1$-$C_6$ haloalkoxyl, $C_1$-$C_6$ alkylsulfonyl, $C_2$-$C_6$ alkoxycarbonyl, or, together with the group bonded to the same N atom, they jointly represent a $C_2$-$C_5$ alkylene group;~~

~~$R_4$, $R_5$ and $R_{42}$ represent a hydrogen atom; a linear or branched $C_1$-$C_6$ alkyl group in turn optionally substituted with halogen atoms; a $C_3$-$C_6$ alkenyl group in turn optionally substituted with halogen atoms; a $Q_7$ group, an arylalkyl group optionally substituted by one or more substituents selected from halogen, $NO_2$, CN, CHO, linear or branched $C_1$-$C_6$ alkyl, linear or branched $C_1$-$C_6$ haloalkyl, linear or branched $C_1$-$C_6$ alkoxyl, linear or branched $C_1$-$C_6$ haloalkoxyl, $C_1$-$C_6$ alkylsulfonyl, $C_2$-$C_6$ alkoxy-carbonyl;~~

~~$R_{12}$, $R_{14}$ and $R_{16}$ represent a hydrogen atom; a linear or branched $C_1$-$C_6$ alkyl group in turn optionally substituted with halogen atoms; a $C_3$-$C_6$ cycloalkyl group; a $C_1$-$C_6$ alkoxyl group; a $C_1$-$C_6$ haloalkoxyl group;~~

~~$R_{13}$ and $R_{15}$ represent a hydrogen atom; a linear or branched $C_1$-$C_6$ alkyl group in turn optionally substituted with halogen atoms; a $C_3$-$C_6$ alkenyl group in turn optionally substituted with halogen atoms; a $Q_7$, $NH_2$, NHCN, $NHNH_2$, NHOH group, an arylalkyl group optionally substituted~~

~~by one or more substituents selected from halogen, $NO_2$, CN, CHO, linear or branched $C_3$-$C_6$ alkyl, linear or branched $C_1$-$C_6$ haloalkyl, linear or branched $C_1$-$C_6$ alkoxyl, linear or branched $C_1$-$C_6$ haloalkoxyl, $C_1$-$C_6$ alkylsulfonyl, $C_2$-$C_6$ alkoxycarbonyl;~~

~~$R_{20}$, $R_{21}$, $R_{22}$, $R_{23}$, $R_{24}$, $R_{25}$, $R_{26}$, $R_{27}$, $R_{28}$, $R_{29}$, $R_{30}$, $R_{31}$, $R_{32}$, $R_{33}$, $R_{34}$, $R_{35}$, $R_{36}$, $R_{37}$, $R_{38}$, $R_{39}$, $R_{40}$ and $R_{41}$, the same or different, represent: a hydrogen atom; a linear or branched $C_1$-$C_6$ alkyl group in turn optionally substituted with halogen atoms; a $C_1$-$C_6$ alkoxyl group; or the two groups attached to the same carbon atom can be joined to each other by $C_2$-$C_5$ alkylene groups, the alkylene groups can in turn be substituted with $C_1$-$C_3$ alkyl groups;~~

-Q[[,]] and $Q_1$, ~~$Q_2$, $Q_3$, $Q_4$, $Q_5$, $Q_6$ and $Q_7$~~ represent an aryl group, [[;]] a $C_3$-$C_6$ cycloalkyl group [[;]] ~~a $C_5$-$C_6$ cycloalkenyl group;~~ or a heterocyclic group selected from ~~triazolyl; triazolonyl;~~ pyrazolyl[[;]] , ~~imidazolyl; imidazolidinonyl;~~ tetrazolyl [[;]] , tetrazolonyl [[;]], ~~isoxazolyl ; furyl; thienyl; pyrrolyl; pyrrolidinyl; pyrrolidinonyl; pyridyl; pyrimidinyl; pyrimidinonyl; pyrazinyl; pyridazinyl;~~ oxazolyl [[;]], thiazolyl[[;]], oxadiazolyl [[;]], thiadiazolyl [[;]], isothiazolyl, ~~; benzoxazolyl; benzothiazolyl;~~ isoxazolinyl~~; 1,3-dioxanyl; 1,4-dioxanyl;~~ , 1,3-dioxolanyl[[;]], tetrahydropyranyl [[;]], oxethanyl [[;]], oxyranyl [[;]], thiazolidinyl [[;]], oxazolidinyl; ~~piperidinyl; piperidinonyl; piperazinyl; morpholinyl; thiazinyl; tetrahydrofuranyl; dioxazolyl; tetrahydrofuroisoxazolyl; 2-oxa-3-azabicyclo[3.1.0]hex-3-enyl;~~

said groups optionally substituted by one or more substituents selected from halogen, [[:]] $NO_2$ ,[[;]] OH, [[;]] CN, [[;]] CHO, [[;]] linear or branched $C_1$-$C_6$ alkyl, [[;]] linear or branched $C_1$-$C_6$ haloalkyl, [[;]] linear or branched $C_1$-$C_6$ alkoxy[[l]], [[;]] linear or branched $C_1$-$C_6$ haloalkoxy[[l]]; ~~$C_1$-$C_6$ cyanoalkyl; $C_2$-$C_6$ alkoxyalkyl; $C_2$-$C_6$ alkylthioalkyl; $C_2$-$C_6$ alkylsulfinylalkyl; $C_2$-$C_6$ alkylsulfonylalkyl; $C_2$-$C_6$ haloalkoxyalkyl; $C_2$-$C_6$ haloalkylthioalkyl; $C_2$-$C_6$ haloalkylsulfinylalkyl; $C_2$-$C_6$ haloalkylsulfonylalkyl; $C_2$-$C_6$ alkoxyalkoxyl or $C_2$-$C_6$ haloalkoxyalkoxyl optionally substituted with a group selected from $C_1$-$C_4$ alkoxyl or $C_1$-$C_4$ haloalkoxyl; $C_2$-$C_6$ alkylthioalkoxyl; $C_2$-$C_6$ haloalkylthioalkoxyl; $C_3$-$C_{12}$ dialkoxyalkyl; $C_3$-$C_{12}$ dialkylthioalkyl; $C_3$-$C_{12}$ dialkylthioalkoxyl; $C_3$-$C_{12}$ dialkoxyalkoxyl; $C_2$-$C_6$ haloalkoxyhaloalkoxyl; $C_3$-$C_{10}$ alkoxyalkoxyalkyl; $C_2$-$C_6$ alkenyl; $C_2$-$C_6$ haloalkenyl; $C_2$-$C_6$ alkenyloxy; $C_2$-$C_6$ haloalkenyloxy; $C_3$-$C_8$ alkenyloxyalkoxyl; $C_3$-$C_8$ haloalkenyloxyalkoxyl; $C_2$-$C_6$ alkynyl; $C_2$-$C_6$ haloalkynyl; $C_2$-$C_6$ alkynyloxy; $C_2$-$C_6$ haloalkynyloxy; $C_3$-$C_8$ alkynyloxyalkoxyl; $C_3$-$C_8$ haloalkynyloxyalkoxyl; $C_3$-$C_{12}$ acylaminoalkoxy; $C_2$-$C_8$ alkoxyiminoalkyl; $C_2$-$C_8$ haloalkoxyiminoalkyl; $C_3$-$C_8$ alkenyloxyiminoalkyl; $C_3$-$C_8$ haloalkenyloxyiminoalkyl; $C_3$-$C_8$ alkynyloxyiminoalkyl; $C_3$-$C_8$ haloalkynyloxyiminoalkyl; $C_5$-$C_{10}$ alkoxyalkynyloxyl; $C_6$-$C_{12}$ cycloalkylideneiminooxyalkyl; $C_6$-$C_{12}$ dialkylideneiminooxyalkyl; aryl optionally substituted; $S(O)_mR_1$; $OS(O)_tR_1$; $SO_2NR_2R_3$; $CO_2R_4$; $COR_5$; $CONR_6R_7$; $CSNR_8R_9$; $NR_{10}R_{11}$; $NR_{12}COR_{13}$; $NR_{14}CO_2R_{15}$; $NR_{16}CONR_{17}R_{18}$;~~

~~$PO(R_{19})_2$; $Z_2(CR_{34}R_{35})_p(C=Y)T$; $Z_3(CR_{36}R37)_v(CR_{38}R_{39}=CR_{40}R_{41})(C=Y)T$;~~

-$Z$; ~~$Z_1$; $Z_2$~~ = O, $S(O)_r$;

~~Y=O, S;~~

-r is equal to 0, 1 or 2;

~~p, q are equal to 1, 2, 3 or 4;~~

~~v is equal to 0 or 1;~~

~~$Z_3$=O, S or a direct bond;~~

~~T represents: a hydrogen atom; a $Z_4R_{42}$ group; a $NR_{43}R_{44}$ group; an aryl group or a heterocyclic group selected from triazolyl; triazolonyl; pyrazolyl; imidazolyl; imidazolidinonyl; tetrazolyl; tetrazolonyl; pyrrolyl; pyrrolidinyl; pyrrolidinonyl; pyridyl; pyrimidinyl; piperidinyl; piperidinonyl; piperazinyl; morpholinyl; said aryl and hetrocyclic groups optionally substituted by one or more substituents selected from halogen; $NO_2$; OH; CN; CHO; linear or branched $C_1$-$C_6$ alkyl; linear or branched $C_1$-$C_6$ haloalkyl; $C_3$-$C_6$ cycloalkyl; $C_5$-$C_6$ cycloalkenyl; linear or branched $C_1$-$C_6$ alkoxyl; linear or branched $C_1$-$C_6$ haloalkoxyl; $C_3$-$C_6$ cyanoalkcyl; $C_2$-$C_6$ alkoxyalkyl; $C_2$-$C_6$ alkylthioalkyl; $C_2$-$C_6$ alkylsulfinylalkyl; $C_2$-$C_6$~~

~~alkylsulfonylalkyl; $C_2$-$C_6$ haloalkoxyalkyl; $C_2$-$C_6$ haloalkylthioalkyl; $C_2$-$C_6$ haloalkylsulfinylalkyl; $C_2$-$C_6$ haloalkylsulfonylalkyl; $S(O)_mR_1$;~~

~~$Z_4$=O, S or a direct bond;~~

~~$R_{43}$ and $R_{44}$, the same or different, represent: a hydrogen atom; a linear or branched $C_1$-$C_6$ alkyl group in turn optionally substituted with halogen atoms; a $C_3$-$C_6$ alkenyl group in turn optionally substituted with halogen atoms; a $Q_7$ group; an arylalkyl group optionally substituted by one or more substituents selected from halogen; $NO_2$; CN; CHO; linear or branched $C_1$-$C_6$ alkyl; linear or branched $C_1$-$C_6$ haloalkyl; linear or branched $C_1$-$C_6$ alkoxyl; linear or branched $C_1$-$C_6$ haloalkoxyl; $C_1$-$C_6$ alkylsulfonyl; $C_2$-$C_6$ alkoxycarbonyl; or they jointly represent a $C_2$-$C_5$ alkylene chain;~~

-D represents[[:]] a monocyclic ~~heterocyclic~~ heteroaryl group ~~of the heteroaryl type,~~ and can be connected to the rest of the structure either through one of its carbon atoms or, when possible, through one of its nitrogen atoms;

-$R_x$ represents a substituent selected from: hydrogen, [[;]] halogen, [[;]] $NO_2$, [[;]] CN, [[;]] CHO, [[;]] OH, [[;]] linear or branched $C_1$-$C_6$ alkyl, [[;]] linear or branched C1-$C_6$ haloalkyl, [[;]] linear or branched $C_1$-$C_6$ alkoxy[[l]], [[;]] linear or branched $C_1$-$C_6$ haloalkoxy[[l]], [[;]] $C_1$-$C_6$ cyanoalkyl, [[;]] $C_2$-$C_6$ alkoxyalky[[l]], [[;]] $C_2$-$C_6$ alkylthioalkyl, [[;]] $C_2$-

$C_6$ alkylsulfinylalkyl, [[;]] $C_2$-$C_6$ alkylsulfonylalkyl, [[;]] $C_2$-$C_6$ haloalkoxyalky[[l]], [[;]] $C_2$-$C_6$ haloalkylthioalkyl, [[;]] $C_2$-$C_6$ haloalkylsulfinylalkyl, [[;]] $C_2$-$C_6$ haloalkylsulfonylalkyl, [[;]] $C_2$-$C_6$ alkoxyalkoxy[[l]] or $C_2$-$C_6$ haloalkoxyalkoxy[[l]], ~~optionally substituted with a group selected from $C_1$-$C_4$ alkoxyl or $C_1$-$C_4$ haloalkoxyl;~~ $C_2$-$C_6$ haloalkylthioalkoxy[[l]], [[;]] $C_3$-$C_{12}$ dialkoxyalkyl, [[;]] $C_3$-$C_{12}$ dialkylthioalkyl, [[;]] $C_3$-$C_{12}$ dialkylthioalkoxy[[l]], [[;]] $C_3$-$C_{12}$ dialkoxyalkoxy[[l]], [[;]] $C_2$-$C_6$ haloalkoxyhaloalkoxy[[l]], [[;]] $C_3$-$C_{10}$ alkoxyalkoxyalkyl, [[;]] ~~$C_2$-$C_6$ alkenyl; $C_2$-$C_6$ haloalkenyl; $C_2$-$C_6$ alkenyloxy; $C_2$-$C_6$ haloalkenyloxy; $C_3$-$C_8$ alkenyloxyalkoxyl; $C_3$-$C_8$ haloalkenyloxyalkoxyl; $C_2$-$C_6$ alkynyl; $C_2$-$C_6$ haloalkynyl; $C_2$-$C_6$ alkynyloxy; $C_2$-$C_6$ haloalkynyloxy; $C_3$-$C_8$ alkynyloxyalkoxyl; $C_3$-$C_8$ haloalkynyloxyalkoxyl; $C_3$-$C_{12}$ acylaminoalkoxy; $C_2$-$C_8$ alkoxyiminoalkyl; $C_2$-$C_8$ haloalkoxyiminoalkyl; $C_3$-$C_8$ alkenyloxyiminoalkyl; $C_3$-$C_8$ haloalkenyloxyiminoalkyl; $C_3$-$C_8$ alkynyloxyiminoalkyl; $C_3$-$C_8$ haloalkynyloxyiminoalkyl; $C_5$-$C_{10}$ alkoxyalkynyloxyl; $C_6$-$C_{12}$ cycloalkylideneiminooxyalkyl; $C_6$-$C_{12}$ dialkylideneiminooxyalkyl; $S(O)_mR_1$; $OS(O)_tR_1$; $SO_2NR_2R_3$; $CO_2R_4$; $COR_5$; $CONR_6R_7$; $CSNR_8R_9$; $NR_{10}R_{11}$; $NR_{12}COR_{13}$; $NR_{14}CO_2R_{15}$; $NR_{16}CONR_{17}R_{18}$; $PO(R_{19})_2$; Q; $ZQ_1$; $(CR20R21)_pQ_2$; $Z(CR_{22}R_{23})_pQ_3$; $(CR_{24}R_{25})_pZQ_4$; $(CR_{26}R_{27})_pZ(CR_{28}R_{29})_qQ_5$; $(CR_{30}R_{31})_pZ(CR_{32}R_{33})_qZ_1Q_6$; $Z_2(CR_{34}R_{35})_p(C=Y)T$; $Z_3(CR_{36}R_{37})_v(CR_{38}R_{39}=CR_{40}R_{41})(C=Y)T$;~~
if several $R_x$ groups are present, these can be the same or different;
~~n=1-~~ 4 [[9]], [[;]]

~~excluding the following compounds having general formula (I) wherein A, B and R have the following meanings: A=4-chlorophenyl, B=1-methylimidazol-2-yl, R=H;~~

~~A=4-nitrophenyl, B=1-(2-hydroxyethyl)-5-nitroimidazol-2-yl, R=H;~~

~~A=phenyl, B=1H-benzimidazol-2-yl, R=$C_2H_5$; A=phenyl, B=4H-1-benzopyran-4-yl, R=$CH_3$;~~

~~A=4-nitrophenyl, B=3-(4-methylphenyl)-1,2,4-oxadiazol-5-yl, R=$CH_3$;A=phenyl, B=4-chloro-2,5-dioxo-2,5-dihydro-1H-pyrrol-3-yl, R=$CH_3$;A=phenyl, B=2-acetyl-1,2,3,4-tetrahydroisoquinolin-1-yl, R=$C_2H_5$; A=2-hydroxy-4-methoxyphenyl, B=thiazol-4-yl, R=$CH_3$; A=phenyl, B=2,5-diphenyl-1,3-oxathiol-2-yl, R=$CH_3$; A=4-nitrophenyl, B=4,6-bis(dimethylamino)-1,3,5-triazin-2-yl, R=$CH_3$; A=phenyl, B=furan-2-yl, R=$CH_3$; A=phenyl, B=1,3-dithian-2-yl, R=$CH_3$; A=phenyl, B=4-chlorothien-2-yl, R=H; A=phenyl, B=5-bromothien-2-yl, R=H; A=phenyl, B=5-methylthien-2-yl, R=H; A=phenyl, B=6-phenylpyrazin-2-yl, R=$CH_3$; A=phenyl, B=3,4-dihydro-3-methyl-2-oxo-2H-1,3-benzo-oxazin-4-yl, R=$CH_3$; A=phenyl, B=benzothiazol-2-yl, R=$CH_3$; A=2-hydroxy-4-methoxyphenyl, B=2-phenylthiazol-4-yl, R=$CH_3$; A=phenyl, B=5-methylfuran-2-yl, R=$CH_3$; A=phenyl, B=3-(4-methylphenyl)-1,2,4-oxadiazol-5-yl, R=$CH_3$; A=phenyl, B=tetrahydrofuran-2-yl, R=$CH_3$; A=phenyl, B=2,3-dihydro-3-hydroxy-2-oxo-1H-indol-3-yl, R=$CH_3$, A=phenyl, B=4-chloro-1-methyl-2,5-dioxo-2,5-dihydro-pyrrol-3-yl, R=$CH_3$;~~

~~A=phenyl, B=22-trifluoroacetyl-1,2,3,4-tetrahydroiso-quinolin-1-yl, R=$C_2H_5$;~~

~~A=phenyl, B=2-acetyl-1,2,3,4-tetrahydroisoquinolin-1-yl, R=CH3;~~
~~A=4-nitrophenyl, B=2-(4-nitrophenyl)-3,5,6-triphenyl-pyridin-4-yl, R=~~
~~$CH_3$;~~
~~A=phenyl, B=4,6-bis(dimethylamino)-1,3,5-triazin-2-yl, R=~~ ~~$CH_3$~~;
~~A=phenyl, B=4-methoxy-5-tert-butoxycarbonyl-1H-pyrro-2-yl, R=~~ ~~$CH_3$~~;
~~A=phenyl, B=1,3-dihydro-3-oxo-isobenzofuran-1-yl, R=~~ ~~$CH_3$~~; ~~A=phenyl, B=(5-methoxycarbonylmethyl)thien-2-yl, R=H;A=phenyl, B=4-methylthien-2-yl, R=H;~~
~~A=phenyl, B=1,4-dihydro-1-methyl-3-nitroquinolin-4-yl, R=H;~~
~~A=phenyl, B=thien-2-yl, R=H; A=phenyl, B=6-methylbenzothiazol-2-yl, R=~~ ~~$CH_3$~~; ~~A=2-methoxycarbonylphenyl, B=phenyl, R=~~ ~~$CH_3$~~; ~~A=2-benzyloxy-4-methoxyphenyl, B=2,3,4-trimethoxyphenyl, R=H; A=4,5-dimethoxy-2-nitrophenyl, B=3,4-dimethoxyphenyl, R=H;A=2-nitrophenyl, B=phenyl, R=H; A=2,4,5-trimethoxyphenyl, B=4-methoxyphenyl, R=H; A=4-bromophenyl, B=phenyl, R=H;~~
~~A=4-bromophenyl, B=2,4-dinitrophenyl, R=~~ ~~$CH_3$~~; ~~A=4-chlorophenyl, B=phenyl, R=H;A=2,4-dibenzyloxy-5-methoxyphenyl, B=1,3-benzodioxol-5-yl, R=H;~~
~~A=2,4-dibenzyloxyphenyl, B=1,3-benzodioxol-5-yl, R=H;A=4-methoxyphenyl, B=2-carboxyphenyl, R=H; A=4-methylphenyl, B=2,4-dinitrophenyl, R=~~ ~~$CH_3$~~;~~A=4-hydroxy-3-methoxyphenyl, B=4-hydroxy-3-methoxyphenyl, R=H; A=2-nitrophenyl, B=4-methylphenyl, R=H;A=4-chlorophenyl, B=4-chlorophenyl, R=H; A=2,4-diacetoxyphenyl, B=phenyl, R=~~ ~~$CH_3$~~;~~A=3-methoxyphenyl, B=phenyl, R=~~ ~~$C_2R_5$~~;

~~A=4-nitrophenyl, B=phenyl, R=H;A=2-nitrophenyl, B=4-n-butoxyphenyl, R=H;~~

~~A=2-nitro-4-chlorophenyl, B=4-methylphenyl, R=H; A=phenyl, B=8-carboxynaphthalenyl, R=$CH_3$; A=2,5-dimethoxyphenyl, B=2-hydroxyphenyl, R=$C_2R_5$; A=4-fluorophenyl, B=2-nitro-4-trifluoromethylphenyl, R=$CH_3$;~~

~~A=3-chloro-4-methylphenyl, B=2,4-dinitrophenyl, R=$CH_3$;A=2-nitro-4-chlorophenyl, B=phenyl, R=H;A=4,5-dimethoxy-2-nitrophenyl, B=4-methylphenyl, R=H; A=2-carboxy-6-nitrophenyl, B=phenyl, R=$CH_3$; A=2,4,5-trimethoxyphenyl, B=3-methoxyphenyl, R=H; A=phenyl, B=4-bromophenyl, R=H; A=6-benzyloxy-2,3,4-trimethoxyphenyl, B=1,3-benzodioxol-5-yl, R=H; A=4,5-dimethoxy-2-nitrophenyl, B=4-methoxyphenyl, R=H; A=4,5-dimethoxy-2-nitrophenyl, B=4-chlorophenyl, R=H; A=2,4-dibenzyloxyphenyl, B=4-methoxyphenyl, R=H;~~

~~A=4-methylphenyl, B=4-methylphenyl, R=H; A=4-dimethylaminophenyl, B=phenyl, R=H; A=4-methoxyphenyl, B=phenyl, R=H;A=4,5-dichloro-2-nitrophenyl, B=4-chlorophenyl, R=H; A=2-nitrophenyl, B=4-methoxyphenyl, R=H; A=phenyl, B=2,5-dimethoxycarbonylaminophenyl, R=$CH_3$; A=4-hydroxy-4-methoxyphenyl, B=2-methoxyphenyl, R=H;A=phenyl, B=4-methylphenyl, R=H;~~

~~A=2-nitrophenyl, B=4-ethoxyphenyl, R=H; A=2-nitro-4-chlorophenyl, B=4-methoxyphenyl, R=H; A=4-chlorophenyl, B=phenyl, R=$C_2H_5$;A=2-t-butoxycarbonyl-5-ethyl-4-methoxyphenyl, B=2,3-dihydro-7-methyl-1,4-benzodioxin-6-yl, R=t-butyl;~~

~~A=phenyl, B=2-nitro-4-trifluoromethylphenyl, R=$CH_3$; A=3,4-dichlorophenyl, B=2,4-dinitrophenyl, R=$CH_3$;A=4,5-dichloro-2-nitrophenyl, B=4-methoxyphenyl, R=H;A=4-methoxy-2-nitrophenyl, B=4-methylphenyl, R=H; A=phenyl, B=anthracene-9-yl, R=$CH_3$;A=phenyl, B=4-methoxyphenyl, R=H;~~

~~A=2,4,5-trimethoxyphenyl, B=phenyl, R=H;A=2,4-diacetoxyphenyl, B=2,4,5-trimethoxyphenyl, R=$CH_3$; A=2-hydroxyphenyl, B=phenyl, R=H;~~

~~A=4-methoxy-2-nitrophenyl, B=phenyl, R=H; A=4,5-dimethoxy-2-nitrophenyl, B-phenyl, R=H;A=2,4-dinitrophenyl, B=phenyl, R=$CH_3$; A=phenyl, B=phenyl, R=$CH_3$;A=phenyl, B=4-dimethylaminophenyl, R=H;A=phenyl, B=2,4-dinitrophenyl, R=$CH_3$;A=4,5-dichloro-2-nitrophenyl, B=4-methylphenyl, R=H;~~

~~A=4-bromophenyl, B=phenyl, R=$CH_3$; A=2-(4-methylphenylsulfonyloxy)-6-methoxyphenyl, B=phenyl, R=H; A=4-methylsulfonylphenyl, B=2-methoxyphenyl, R=$CH_3$; A=4-methoxyphenyl, B=4-methoxyphenyl, R=$CH_3$;~~

~~A=phenyl, B=4-chlorophenyl, R=H; A=2-nitrophenyl, B=4-nitrophenyl, R=H;~~

~~A=phenyl, B=phenyl, R=H; A=2,4-dimethoxyphenyl, B=4-methoxyphenyl, R=H;~~

~~A=2-nitrophenyl, B=4-n-hexyloxyphenyl, R=H; A=4-methoxy-2-nitrophenyl, B=4-methoxyphenyl, R=H; A=phenyl, B=9-carboxyphenanthren-10-yl, R=$CH_3$;~~

~~A=phenyl, B=phenyl, R= $CH_3$; A=3,4-dimethoxyphenyl, B=3,4-dimethoxyphenyl, R=H; A=2,4-dimethoxyphenyl, B=phenyl, R=H; A=phenyl, B=2-hydroxy-3,4,6-trimethyl-5-methoxyphenyl, R= $CH_3$; A=4-chloro-2-nitrophenyl, B=4-chlorophenyl, R=H; A=2-nitrophenyl, B=4-chlorophenyl, R=H; A=2,4,5-trimethoxyphenyl, B=3,4-dimethoxyphenyl, R=H; A=4-chlorophenyl, B=2,4-dinitrophenyl, R= $CH_3$;~~

~~A=4,5-dichloro-2-nitrophenyl, B=phenyl, R=H; A=4-methoxyphenyl, B=phenyl, R= $CH_3$; A=2,4-dibenzyloxyphenyl, B=3,4-dimethoxyphenyl, R=H; A=4-methylthiophenyl, B=4-methoxyphenyl, R= $CH_3$;A=phenyl, B=phenyl, R= $C_2H_5$;~~

~~A=4-methoxyphenyl, B=2,4-dinitrophenyl, R= $CH_3$; A=2-nitrophenyl, B=3-chlorophenyl, R=H; A=2-nitrophenyl, B==3,4-dimethoxyphenyl, R=H;~~

~~A=4-methoxyphenyl, B=4-methoxyphenyl, R=H; A=2-hydroxyphenyl, B=4-methoxyphenyl, R=H; A=phenyl, B=2,5-bis(phenacylamino)phenyl, R= $CH_3$;~~

~~A=4-nitrophenyl, B=4-methylphenyl, R=H; A=2-nitrophenyl, B=4-n-pentyloxyphenyl, R=H; A=4-methoxy-2-nitrophenyl, B=4-chlorophenyl, R=H;~~

~~A=phenyl, B=2-carboxynaphthalen-1-yl, R= $CH_3$.~~

18. (Canceled)

19. (New): Derivatives of 1,3-diones having general formula (I) according to claim 17, wherein:

-A represents a phenyl or a pyridyl group optionally substituted by one or more substituents selected from halogen, $NO_2$ , CN, CHO, OH, linear or branched C1-$C_6$ alkyl, linear or branched $C_1$-$C_6$ haloalkyl, linear or branched $C_1$-$C_6$ alkoxy, linear or branched $C_1$-$C_6$ haloalkoxy, $C_1$-$C_6$ cyanoalkyl, $C_2$-$C_6$ alkoxyalkyl, $C_2$-$C_6$ alkylthioalkyl, $C_2$-$C_6$ alkylsulfinyl-alkyl, $C_2$-$C_6$ alkylsulfonylalkyl, $C_2$-$C_6$ haloalkoxyalkyl, $C_2$-$C_6$ haloalkyl-thioalkyl, $C_2$-$C_6$ haloalkylsulfinylalkyl, $C_2$-$C_6$ haloalkylsulfonylalkyl, $C_2$-$C_6$ alkoxyalkoxy, $C_2$-$C_6$ haloalkoxyalkoxy, $C_2$-$C_6$ alkylthioalkoxy, $C_2$-$C_6$ haloalkylthioalkoxy, $C_3$-$C_{12}$ dialkoxyalkyl, $C_3$-$C_{12}$ dialkylthioalkyl, $C_3$-$C_{12}$ dialkylthioalkoxy, $C_3$-$C_{12}$ dialkoxyalkoxy, $C_2$-$C_6$ haloalkoxyhaloalkoxy, $C_3$-$C_{10}$ alkoxyalkoxyalkyl, —$S(O)_mR_1$, —$OS(O)_tR_1$, —$SO_2NR_2R_3$, −Q, −$ZQ_1$;

-B represents a D-$(R_x)_n$ group;

-R represents a cyclopropyl or a trifluoromethyl group;

-$R_1$ represents a $C_1$-$C_6$ alkyl group or a $C_1$-$C_6$ haloalkyl group;

-m is equal to 0, 1 or 2;

-t is equal to 1 or 2;

-$R_2$ and $R_3$, the same or different, represent a hydrogen atom, a linear or branched $C_1$-$C_6$ alkyl group in turn optionally substituted with halogen atoms;

-Q and $Q_1$, represent an aryl group, a $C_3$-$C_6$ cycloalkyl group, or a heterocyclic group selected from pyrazolyl, tetrazolyl, tetrazolonyl oxazolyl, thiazolyl, oxadiazolyl, thiadiazolyl, isothiazolyl, isoxazolinyl, 1,3-dioxolanyl, tetrahydropyranyl, oxethanyl, oxyranyl, thiazolidinyl, oxazolidinyl; said groups optionally substituted by one or more substituents selected from halogen, $NO_2$ , OH, CN, CHO, linear or branched $C_1$-$C_6$ alkyl, linear or branched $C_1$-$C_6$ haloalkyl, linear or branched $C_1$-$C_6$ alkoxy, linear or branched $C_1$-$C_6$ haloalkoxy

-Z = O, $S(O)_r$;

-r is equal to 0, 1 or 2;

-D represents a monocyclic heteroaryl group selected from 1,2,4-oxadiazolyl, tetrazolyl, thiazolyl or pyridyl;

-$R_x$ represents a substituent selected from: hydrogen, halogen, $NO_2$, CN, CHO, OH, linear or branched $C_1$-$C_6$ alkyl, linear or branched $C_1$-$C_6$ haloalkyl, linear or branched $C_1$-$C_6$ alkoxy, linear or branched $C_1$-$C_6$ haloalkoxy, $C_1$-$C_6$ cyanoalkyl, $C_2$-$C_6$ alkoxyalky, $C_2$-$C_6$ alkylthioalkyl, $C_2$-$C_6$ alkylsulfinylalkyl, $C_2$-$C_6$ alkylsulfonylalkyl, $C_2$-$C_6$ haloalkoxyalky, $C_2$-

$C_6$ haloalkylthioalkyl, $C_2$-$C_6$ haloalkylsulfinylalkyl, $C_2$-$C_6$ haloalkyl-sulfonylalkyl, $C_2$-$C_6$ alkoxyalkoxy or $C_2$-$C_6$ haloalkoxyalkoxy, $C_2$-$C_6$ haloalkylthioalkoxy, $C_3$-$C_{12}$ dialkoxyalkyl, $C_3$-$C_{12}$ dialkylthioalkyl, $C_3$-$C_{12}$ dialkylthioalkoxy, $C_3$-$C_{12}$ dialkoxyalkoxy, $C_2$-$C_6$ haloalkoxyhalo-alkoxy, $C_3$-$C_{10}$ alkoxyalkoxyalkyl;

if several $R_x$ groups are present, these can be the same or different;

-n = 1- 4.

## REMARKS

In paragraphs 1-3 of the Office Action, the Examiner withdrew the prior grounds of rejection.

In paragraph 5 of the Office Action, claims 2 and 13-17 were rejected under 35 U.S.C.§112, first paragraph, because the specification while being enabling for the compounds demonstrated as being useful and those reasonably related, does not reasonably provide enablement for the asserted utility of the entirety of the claim scope.

Reconsideration is requested.

Claim 17 has been amended to adopt in part the Examiner's suggestions regarding the definition of A, B and R. In addition a Declaration of Giovanni Meazza is attached which reports on the testing of 37 additional compounds on six species of plants for pre-emergent and post emergent herbicidal activity. The results show that all of the tested compounds have herbicidal activity. It is requested that this evidence be considered with respect to this ground of rejection.

The present ground of rejection urges that the specification is not enabling for the asserted utility for the entirety of the claim scope. The specification, at pages 119 and 120, points out that the claimed compounds have a high herbicidal activity which makes them suitable for use in the defense of useful crops from weeds. More than 30 species of weeds are mentioned at pages 119 and 120 as being susceptible to the compounds of the invention. At page 120, lines 12-17, several crops are mentioned for which many of the compounds of the invention have

showed no toxic effects. Guidance for the quantities of the compounds to be used is set forth in the specification at page 120 and 121 as well as the manner in which the compounds may be formulated for application to the site of use.

The instant rejection is based on a statute that requires an applicant for a patent to provide sufficient information that would enable one skilled in the art to make and use the invention. No issue has been raised with regard to the detailed information as to how to make the claimed compounds.

The rejection appears to question the usefulness of the invention which is a matter that is properly raised under 35 U.S.C.§101, MPEP§2107.01 (Rev. 1, Feb 2003) discusses at length the relation between Section 101 and Section 112, first paragraph. All that is required by 35 U.S.C.§101 is that some use for the claimed invention must be set forth in the specification. This has been done in the present specification. The requirements of 35 U.S.C.§112, first paragraph may only be properly used to reject patent claims if one skilled in the art could not practice the claimed invention based on the disclosure. The Examiner has urged that undue experimentation would be required to synthesize and screen the claimed invention and methods of using the same (Office Action, page 7). The case of *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18 (CCPA 1970) speaks in generalities about enablement but does not provide guidance as to what constitutes "support" for a patent claim in an application for new herbicidal compounds.

In virtually every patent for a new herbicidal compound, the disclosure regarding utility merely identify one or more plant species that is susceptible

to the amount of herbicide to be applied.

The Examiner has cited *United States v. Telectronics*, 8 USPQ2d. 1217 (Fed. Cir. 1986), *Ex parte Forman*. 230 USPQ 546 (Bd. Pat. App. & Int. 1986) and *In re Wand,* 8 USPQ2d 1400 (Fed, Cir, 1988) as pointing out factors to be considered in a determination of the enabling nature of a patent specification.

The *Wands* case was decided after *Telectronics* and *Forman* and that decision listed eight factors to be considered in connection the question of enablement: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability of the art, and (8) the breadth of the claims. With regard to factor (1) it is submitted that there is little or no experimentation required for a skilled worker in the art to be able to apply the claimed compounds to the environment of use. The amount of labor to make the full scope of a claimed invention is not an issue as only the carrying out of unguided experiments that are necessary to discover information that was not disclosed in the patent application may be considered in resolving an issue of undue experimentation. The Examiner has not identified what experiments would be necessary to practice the invention and conclusory statements regarding this issue do not establish that undue experimentation would be required to practice the invention.

Factor (2) relates to the amount of direction or guidance given in the patent application. The claimed invention is practiced by applying the compounds to an area where a herbicidal effect is desired. The detailed directions at pages 120-121 provide this information and the specification at

pages 104-119 provides detailed information for the making of the disclosed compounds. The concern of factor (3) does not arise because it is not necessary for the specification to recite that which is already known, i.e how to apply a herbicide. The nature of the invention (Factor 4) does not cause undue experimentation because the invention involves obtaining a herbicidal effect which may require a substantial amount of work to make and apply the numerous compounds disclosed by the applicant but this is not experimentation as it involves using the information disclosed in the specification with the ordinary skill of a worker in the herbicidal art and would not be an attempt to discover undisclosed information.

The state of the art (Factor 5) does not provide any basis on which to urge that undue experimentation is required to practice the invention because the synthesis of organic compounds is a highly developed art as is the art of applying chemical compounds to obtain a herbicidal effect. The level of skill in the art (Factor 6), which is related to the field of herbicides is quite high and many persons who labor in this field hold postgraduate degrees and have many years of practical experience.

Factor 7 relates to predictability in the art which does not arise in the present application because the inventor has disclosed in the application many specifically named compounds and has provided detailed information for their synthesis at pages 104-119 of the specification as well as in the specific examples. Test data for herbicidal effectiveness is found in the specification at pages 228-232 and in the attached Meazza Declaration. This information provides strong evidence that the compounds may be made and used according to the invention. The breadth of the claims is a Wands factor (Factor 8) that

does not arise in the present application because the claims are specific to an ascertainable class of compounds for a specific use. If there is no issue as to operability, there can be no issue of undue breadth in the present application because the claims specify a group of compounds which may be used according to disclosed directions. The Meazza Declaration has been noted above and it provides additional evidence of the effectiveness of additional compounds within the claims.

The Examiner has not cited any missing information regarding the "how to make and use" requirements of 35 U.S.C.§112, first paragraph The question of the operability of the claimed method is not properly raised under 35 U.S.C.§112, first paragraph unless reasons can be given that are directed to the lack of information as to how to carry out the invention. For these reasons, it is requested that this ground of rejection be withdrawn.

In paragraphs 7, 8 and 9 of the Office Action, claims 3 and 13-17 were rejected under 35 U.S.C.§112, second paragraph.

Reconsideration is requested.

The excluded compounds on pages 13-15 of claim 17 have been canceled by this Amendment. The semi-colons have been deleted from the claims in favor of commas and the present Amendment has been presented in a larger type font to provide greater clarity for the subscripts in the chemical formulas. For these reasons, it is requested that this ground of rejection be withdrawn.

An early and favorable action is earnestly solicited.

Respectfully submitted,

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